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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,492	09/19/2003	Andras Fazakas	FAZAKASCIP	8437
545	7590	06/07/2004	EXAMINER	
ANTHONY H. HANDAL KIRKPATRICK & LOCKHART, LLP 599 LEXINGTON AVENUE 31ST FLOOR NEW YORK, NY 10022-6030			TIBBITS, PIA FLORENCE	
			ART UNIT	PAPER NUMBER
			2838	
DATE MAILED: 06/07/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. <u>10/666,492</u>	Applicant(s) FAZAKAS, ANDRAS	
	Examiner Pia F Tibbits	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification ~~is~~ objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in answer to the continuation in part and the preliminary amendment filed 4/15/2004. Claims 1-12 were canceled, and claims 13-17 were added.

Information Disclosure Statement

1. For Continuation-In-Part applications filed under 37 CFR 1.53(b): in order to ensure consideration of information previously submitted, but not considered, in a parent application, applicant must resubmit the information in the continuing application in compliance with 37 CFR 1.97 and 37 CFR 1.98. The listing of references is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2), which require a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; etc. See also MPEP 609.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the conventional names, as described in the specification, e.g. potentiometer, AND gate, pulse generator, etc., shown in figures 1-4 with non-conventional symbols. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because there is no controller to store an operational program, with memory for storing process parameters and variables, to repeatedly turn the charging current to a battery on and off during a given time in order to control the charging process, to determine whether or not the battery is fully charged. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter: "predetermined threshold"; "time elapsed"; "subsequent sampling"; "predetermined number of sampling periods"; "generating step". See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).
Correction is required.

Claim Objections

6. Claim 13, 14, 16 and 17 are objected to because of the following informalities:

Claim 13: --- a battery being charged--- to replace "a battery being charges".

---a changed value --- to replace "the changed value" in order to provide proper antecedence.

---a value --- to replace "the value" in order to provide proper antecedence.

---a previous period--- to replace "the previous period" in order to provide proper antecedence.

Claim 14: ----predetermined threshold level--- to replace "threshold level" in order to provide proper antecedence.

Claim 16:---a generating step--- to replace "said generating step" in order to provide proper antecedence.

Claim 17: ---to a few--- to replace "till a few".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13: the statement "periodically sampling an electrical parameter of the battery, said parameter being selected from the battery voltage and the charging current" is confusing since the specification, on page 9, describes that "the circuit in fig.1 can determine the change of voltage signals only".

the statement "comparing at each sampling a changed value of said electrical parameter relative to a value taken in the previous period" is confusing, since there is no clock or timer to measure the periods.

Claim 14: "threshold level being less than 1 mV" is incorrect since the threshold measures the rate of change (to the value taken in a previous period), and therefore it should be 1mV/min.

The above are but a *few* specific examples of indefinite and functional or operational language used throughout the claims, and are only intended to illustrate the extensive revision required to overcome the rejection under 35 USC 112, second paragraph. The above-mentioned corrections therefore, are in no way a complete and thorough listing of every indefinite and functional or operational language used throughout the claims. Applicant is required to revise all of the claims completely, and not just correct the indefinite and functional or operational languages mentioned. The following art rejections are given in view of the above rejections of claims under 35 USC 112, second paragraph. Therefore, the following art rejections are applied only as far as the claims are understood in view of rejections made under the second paragraph of 35 USC 112.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 13, as best as it can be understood at this time, are rejected under 35 U.S.C. 102() as being anticipated by **Yamagishi et al.** [hereinafter Yamagishi][5451880].

Yamagishi discloses in figures 1 and 2 a microcomputer 4 comprising a voltage-measuring device for measuring a secondary battery 1 voltage at predetermined regular time intervals; a voltage-setting device for presetting a reference voltage value at a level exceeding, by a predetermined magnitude, the secondary battery voltage which is expected to be attained upon completion of the charge; and the comparator device used for comparing between a measured secondary battery voltage and a preset reference voltage value and for additionally monitoring these voltages [see also column 2, lines 14-50]. Yamagishi also discloses the microcomputer 4 provides a battery-charge control under which the quick charge is stopped by comparing the detected battery voltage value with the preset reference voltage value **and** a $-\Delta V$ /threshold control system [see also column 3, lines 40-43].

With respect to the method claim 13: the method steps will be met during the normal operation of the apparatus described above.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 14-17, as best as they can be understood at this time, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagishi, as described above.

Yamagishi discloses controlling the charging process of a battery by comparing the detected battery voltage value with the preset reference voltage value and a $-\Delta V$ control system. Yamagishi does not disclose specifically a $-\Delta V$ /threshold level being less than 1 mV/min. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a selection for the threshold level, since it has been held that discovering an "optimum" or "preferred" value for a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As to claim 15, changing the time elapsed between two subsequent sampling moments to conform to the actual battery type and charging method: Yamagishi discloses that microcomputer 4 includes voltage detection lines 8-1 and 8-2, and in step 1 following the start of the battery-charge operation that the reference voltage value of 20% higher than the expected charge complete voltage the assembled battery is set as one of the two voltages for the voltage comparison and then inputted into the microcomputer 4 as the present reference voltage value [see also column 4, lines 29-37]. It would have been obvious to a person having ordinary skill in the art to input in the microcomputer program changes to conform to the actual battery type and charging method without undue experimentation.

As to claim 16, storing the changed values throughout a predetermined number of sampling periods and issuing an end-of-charge command if during the predetermined number of sampling periods the majority of the stored changed values lie below the threshold level: Yamagishi discloses in step 2, the voltage of the assembled battery is compared at predetermined regular time intervals with the reference voltage value. When the voltage of the assembled battery has reached a threshold value, the microcomputer 4 makes an affirmative or negative decision [see also column 4, lines 38-48].

As to claim 17, the time elapsed between two subsequent sampling moments being in the range from a fraction of a minute to a few number of minutes, absent any criticality, is only considered to be the use of "optimum" time elapsed that one having ordinary skill in the art at the time the invention was made would have been able to determine using routine experimentation, since the courts have held that

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discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Under some circumstances, however, range changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the Prior Art. *In re Dreyfus*, 22 CCPA (Patents) 830, 73 F.2d 931, 24 USPQ 52; *In re Waite et al.*, 35 CCPA (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. *In re Swenson et al.*, 30 CCPA (Patents) 809, 132 F.2d 1020, 56 USPQ 372; *In re Scherl*, 33 CCPA (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though applicant's modification results in great improvement and utility over the Prior Art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. *In re Sola*, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; *In re Norman et al.*, 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; *In re Irmischer*, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Swain et al.*, 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; *Minnesota Mining and Mfg. Co. v. Coe*, 69 App. D.C. 217, 99 F. 2d 986, 38 USPQ 213; *Allen et al. v. Coe*, 77 App. D. C. 324, 135 F.2d 11, 57 USPQ 136.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as best as it can be understood at this time. The prior art cited in PTO-892 and not mentioned above disclose related apparatus, as best as it can be understood at this time: **Siemer** [4820965] discloses in fig.1 a voltage comparator 24 to detect a voltage of battery 14, compare it to a voltage reference 26, and determine charging needs.

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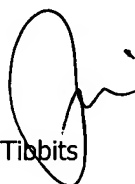
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571/272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is 571/272-2084.

15. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax number is 703/872-9306.

PFT

February 19, 2003



Pia Tibbits

Primary Patent Examiner